oxygen, wherein the presence of the sensor composition is non destructive to said at least one enzyme;

(ii) irradiating said sensor composition with light containing wavelengths which cause said luminescent compound to luminesce;

(iii) measuring or visually observing the luminescent property from said luminescent compound while irradiating said sensor composition with said light;

(iv) comparing said measurement to that of a control, wherein said control is selected from the group consisting of:

a reagent control not containing at least one enzyme capable of catalyzing said oxidative reactions and a calculated threshold;

wherein a change in luminescent property relative to luminescent property of the control is indicative of the presence or absence of said oxidative reactions; and

(v) in the event that no change in luminescent property relative to luminescent property of the control is measured or observed, repeat steps (ii), (iii), (iv) as needed, to determine the presence or absence of said oxidative reactions in said solution.

49. (Amended) A method for determining presence or absence of oxidative reactions catalyzed by at least one enzyme in a solution comprising:

(i) placing said solution in a container in which said fluid is substantially isolated from atmospheric oxygen and placing within said container, but not in direct contact with said fluid, a sensor composition which comprises a luminescent compound that exhibits a change in luminescent property, when irradiated with light containing wavelengths which cause said compound to luminesce, upon exposure to oxygen, wherein the presence of the sensor composition is non-destructive to said at least one enzyme;

(ii) irradiating said sensor composition with light containing wavelengths which cause said luminescent compound to luminesce;

(iii) measuring or visually observing the luminescent property from said luminescent compound while irradiating said sensor composition with said light;

(iv) comparing said measurement to that of a control, wherein said control is selected from the group consisting of:

a reagent not containing at least one enzyme capable of catalyzing said oxidative reactions and a calculated threshold,

wherein a change in luminescent property relative to luminescent property of the control is indicative of the presence or absence of said oxidative reactions; and

(v) in the event that no change in luminescent property relative to luminescent property of the control is measured or observed, repeat steps (ii), (iii), (iv) as needed, to determine the presence or absence of oxidative reactions in said solution.

Please add the following new Claims 91-102.

91. (New) The method of claim 1 wherein said solution is further contacted with liquid or semi-solid biomaterials for promoting or enabling cellular growth and respiration.

92. (New) The method of claim 91 wherein said biomaterials are selected from the group consisting laminin, collagen IV, entactin, heparan sulfate proteoglycans, defined mammalian and insect cell growth factors, and matrix metalloproteinases, said concentration being effective for promoting or enabling cellular growth and respiration.

93. (New) The method of claim 92 wherein said biomaterial is Matrigel.

94. (New) The method of claim 1 wherein, in step (i) said solution also contacted with an effective concentration of one or more extracellular matrices, said concentration being effective for promoting or enabling cellular growth and respiration.

95. (New) The method of claim 94 wherein said extracellular matrix is collagen.

96. (New) The method of claim 1 wherein, in step (i), said solution is contacted with an effective concentration or one or more additives or coating substances, selected from the group consisting of penicillin, streptomycin, hingizone, non-essential amino acids, sodium pyruvate, and fetal bovine serum, said concentration being effective for promoting or enabling cellular growth and respiration.

97. (New) The method of claim 49 wherein said solution is further contacted with liquid or semi-solid biomaterials for promoting or enabling cellular growth and respiration.

98. (New) The method of claim 97 wherein said biomaterials are selected from the group consisting laminin, collagen IV, entactin, heparan sulfate proteoglycans, defined mammalian and insect cell growth factors, and matrix metalloproteinases, said concentration being effective for promoting or enabling cellular growth and respiration.

99. (New) The method of claim 98 wherein said biomaterial is Matrigel.

100. (New) The method of claim 49 wherein, in step (i) said solution also contacted with an effective concentration of one or more extracellular matrices, said concentration being effective for promoting or enabling cellular growth and respiration.

101. (New) The method of claim 100 wherein said extracellular matrix is collagen.

102. (New) The method of claim 49 wherein, in step (i), said solution is contacted with an effective concentration or one or more additives or coating substances, selected